

CLAIMS:

1. A cutting auger comprising:

a first auger blade having a first drive core and a first helical auger flight carried on the first drive core for rotation about a longitudinal axis of the first drive core with a cutting edge at an axial end face of the first auger flight such that when rotated the cutting edge cuts a hole equal in diameter to the helical flight and the helical flight carries the cut material away from the cutting edge;

a second auger blade having a second drive core and a second helical auger flight carried on the second drive core for rotation about a longitudinal axis of the second drive core with a cutting edge at an axial end face of the second auger flight such that when rotated the cutting edge cuts a hole equal in diameter to the helical flight and the helical flight carries the cut material away from the cutting edge;

the second auger blade being coaxial with the first and arranged with the cutting edge thereof axially in advance of the first;

the second auger blade having a smaller diameter than the first;

the first and second helical auger flights being arranged with the helical turns thereof in opposed angular direction;

and a drive assembly arranged to rotate the first and second cutting augers in opposed direction with the first driven at a slower angular velocity than the second.

2. The cutting auger according to Claim 1 wherein the drive assembly is mounted at a rear end of the first cutting auger.

3. The cutting auger according to Claim 1 wherein the drive assembly is mounted at a housing having at least one handle for manually holding the cutting auger for preventing rotation of the cutting auger about the axis.

4. The cutting auger according to Claim 1 wherein the drive
5 assembly includes a motor.

5. The cutting auger according to Claim 1 wherein the drive assembly includes a manually operable crank.

6. The cutting auger according to Claim 5 wherein the crank includes a ratchet.

10 7. The cutting auger according to any one of Claims 1 to 6 wherein the second cutting auger has a rear end at or adjacent the cutting edge of the first auger

8. The cutting auger according to Claim 1 wherein the second cutting auger is shorter than the first cutting auger.

15 9. The cutting auger according to Claim 1 wherein the drive assembly includes a planetary gear set.

10. The cutting auger according to Claim 9 wherein the second drive core is driven by the sun of the planetary gear set and the second drive core is driven by the ring of the planetary gear set.

20 11. The cutting auger according to Claim 1 wherein the drive assembly includes two planetary gear sets arranged axially spaced.

12. The cutting auger according to Claim 11 wherein the second cutting auger has the second drive core connected to the planets of the first

planetary gear set, and wherein the sun of the first planetary gear set is driven, wherein the sun of the second planetary gear set is driven commonly with the second drive core and wherein the first drive case is driven from the ring of the second gear set.

5 13. The cutting auger according to Claim 1 wherein the first cutting auger is driven at a rate of the order 3 times less than the second cutting auger.

 14. The cutting auger according to Claim 1 wherein the ratio of the diameters of the cutting augers is arranged relative to the difference in speed thereof such that the torque is substantially balanced when both cutting augers are cutting.